

CLAIMS

1. A catalyst composition comprising about 5-55 wt% metal-doped anionic clay, about 10-50 wt% zeolite, about 5-40 wt% matrix alumina, about 0-10 wt% silica, about 0-10 wt% of other ingredients, and the balance kaolin.

5 2. The catalyst composition of claim 1 wherein the anionic clay is doped with at least one compound containing an element selected from the group consisting of Zn, Fe, V, Cu, W, Mo, Co, Nb, Ni, Cr, Ce, and La.

10 3. The catalyst composition of claim 1 wherein the anionic clay is an Al-Mg-containing anionic clay, an Al-containing non-Mg anionic clay, a Mg-containing non-Al anionic clay, or a non-Mg non-Al anionic clay.

15 4. A process for the preparation of the catalyst composition of claim 1 wherein zeolite, metal-doped anionic clay, alumina, kaolin, and optionally silica and other ingredients are mixed in aqueous suspension and subsequently shaped to form particles.

20 5. The process of claim 4 wherein the metal-doped anionic clay is obtained by mixing a trivalent metal source and a divalent metal source, at least one of them being water-insoluble, in aqueous suspension and aging the mixture in the presence of at least one metal dopant.

25 6. The process of claim 5 wherein the trivalent metal is selected from the group consisting of aluminium, gallium, indium, iron, chromium, vanadium, cobalt, manganese, cerium, niobium, lanthanum, and combinations thereof.

7. The process of claim 5 wherein the divalent metal source and/or the trivalent metal source are selected from the group consisting of oxides, hydroxides, carbonates, hydroxycarbonates, bicarbonates, acetates, and hydroxyacetates.
- 5 8. The process of claim 5 wherein the divalent metal is selected from the group consisting of magnesium, zinc, nickel, copper, iron, cobalt, manganese, calcium, barium, and combinations thereof.
- 10 9. The process of claim 5, wherein use is made of a metal-doped divalent and/or metal-doped trivalent metal source.
- 15 10. The process of claim 4 wherein the metal-doped anionic clay is obtained by aging a trivalent metal source and a divalent metal source, at least one of them being water-insoluble, in aqueous suspension to form an anionic clay, thermally treating the anionic clay to form a solid solution, and rehydrating the solid solution in the presence of at least one metal dopant to form a metal-doped anionic clay.
- 20 11. The process of claim 10 wherein the trivalent metal is selected from the group consisting of aluminium, gallium, indium, iron, chromium, vanadium, cobalt, manganese, cerium, niobium, lanthanum, and combinations thereof.
- 25 12. The process of claim 10 wherein the divalent metal source and/or the trivalent metal source are selected from the group consisting of oxides, hydroxides, carbonates, hydroxycarbonates, bicarbonates, acetates, and hydroxyacetates.

13. The process of claim 10 wherein the divalent metal is selected from the group consisting of magnesium, zinc, nickel, copper, iron, cobalt, manganese, calcium, barium, and combinations thereof.

5 14. The process of claim 10, wherein use is made of a metal-doped divalent and/or metal-doped trivalent metal source.

10 15. A process for the production of gasoline and/or diesel having a reduced sulfur content and/or a reduced nitrogen content comprising contacting a hydrocarbon feedstock with the catalyst composition of claim 1 at fluid catalytic cracking conditions.